

BRITANNIA COMPANY,

Tool * Makers,

100, HOUNDSDITCH, LONDON.



Lathe No. 6.

This Lathe has been designed to meet the demand for a low-priced tool, PROPERLY CONSTRUCTED and accurate.

Those who have seen and examined it pronounce it to be SUPERIOR TO ANY OTHER yet introduced.

It has a planed iron bed, 20in. long; 2½in. centre heads, which can easily be blocked up to 4in. for wood turning; will admit 11in. between centres. It is fitted with a well-designed stand with a turned fly-wheel, 19in. diameter.

Each Lathe has a spanner, hand rest, and two tees, driver chuck and centres, drill chuck, and fork centre for wood.

The "catchplate," shown in illustration, has been replaced by a more convenient "driver chuck."

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Price, complete . . . . £2 15s.

Slide Rest to Suit, £2.

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Even this, our Cheapest Lathe, has a Conical Mandrel.

Beware of so-called Cheap Lathes, which have no provision for taking up wear.

BRITANNIA WORKS, COLCHESTER, ENGLAND.

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No. 2 AND 3 LATHES.

Suitable for Amateurs, Jewellers, Dentists, or any light use.



No. 2.

24in. bed, 2½in. centres, turning 14in. long by 5in. in diameter.

	£	s.	d.
Price without Stand, as Bench Lathe only	1	15	0
Or with Stand, Fly-wheel, and Treadle complete	3	10	0
Foot-power Motion, with Treadle and Frame, and 14in. Fly-wheel, as illustration above	1	0	0

No. 3.

30in. bed, 3in. centres, turning 18in. long by 6in. in diameter.

Price without Stand, as Bench Lathe only	2	5	0
Or with Stand, Fly-wheel, and Treadle complete	4	5	0
If with Gap Bed, extra	0	10	0
Foot-power Motion, with 20in. Fly-wheel, Treadle and Frame, as illustrated above	1	10	0

First-class well-finished Lathes with machine-planed iron bed ; headstock has steel mandrel with conical neck and adjusting screw and lock nut to take up wear ; 3-speed bright turned cone pulley ; hardened centres, driver chuck, cylinder mandrel with square thread traverse screw to tail stock, hand rest and two tees. Substantial iron stand, with polished wood top and tool drawer, turned speed fly-wheel, and easy treadle motion.

Circular saws, emery and buff wheels, can be used in these Lathes.

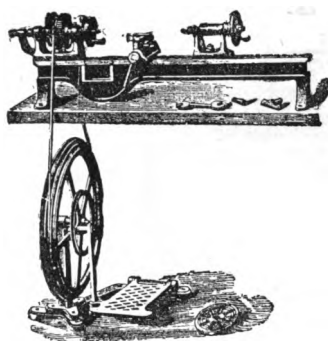
Fret Sawing Appliance to suit the No. 3 Lathe, which attaches very easily to bed, and is driven by the Lathe, price £1 10s.

NOTICE.—This Lathe is now fitted with Stand as No. 6, but stronger. Weight, complete, 128lb.

BRITANNIA WORKS, COLCHESTER, ENGLAND.

LATHES BACK-GEARED.

No. 3.



A first-class, well-finished Lathe, with machine-planed iron bed, plain or with gap; back-geared headstock, cast steel mandrel, conical necks, tail pin running through; adjusting screw and lock nuts to take up wear; 3-speed bright turned cone pulley; steel centres; tailstock with cylinder mandrel, square thread traverse screw; eccentric hand rest and 2 tees and catchplate as shown.

Bed 30in. long, and 3in. centres, turning 18in. by 6in.

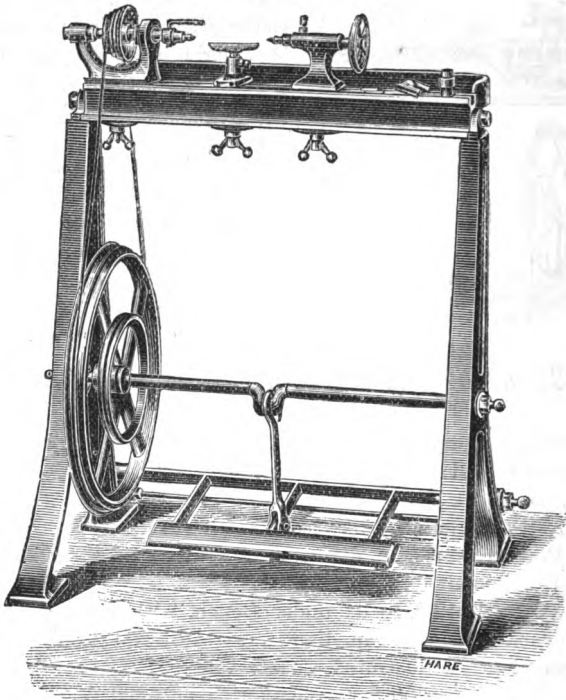
	£	s.	d.
Price without Stand, as Bench Lathe only, with back-geared headstock	4	0	0
Ditto, with back gear and gap bed	4	10	0
Ditto, with 3ft. gap bed like No. 13 lathe, extra	1	0	0
Face Plate, to suit 5½in. diameter	0	10	0
Slide Rest to suit	2	10	0
Foot Power Motion, to fix under Bench, with 4-speed turned fly wheel, 20in. diameter, treadle and frame complete, as illustrated	1	10	0
Substantial Iron Stand complete, with polished wood top and tool drawer, 4-speed turned fly-wheel, 20in. diameter, treadle, &c.	2	0	0
Ditto, of a heavier make, with very heavy fly wheel, as shown with No. 13 Lathe	2	10	0
Lathes fitted with extra hardened mandrel and collars, extra	1	10	0
Ditto, division plate and steel index	1	10	0

*Can also be fitted with Fret Sawing Appliance,
Circular Saws, Emery and Buff Wheels, &c.*

BRITANNIA WORKS, COLCHESTER, ENGLAND.

NEW SINGLE GEARED LATHE.

No. 8.



3½ in. Centres. 2 ft. 6 in. Bed.

WILL TAKE 1½ INCHES BY 7 INCHES BETWEEN CENTRES.

THE above is introduced to supply a demand for a Lathe coming between our No. 3 and No. 4 patterns. It is fitted with gunmetal mountings, and it can be recommended with confidence for general light turning, and for amateurs, clock-makers, &c.

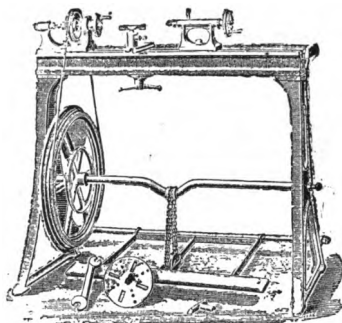
It is thoroughly well made, and very light running. The fast head is fitted with best steel mandrel and best steel collar, both hardened, 4-speed turned cone pulley, nose gin. Whitworth; the loose head has steel cylindrical spindle, square thread traverse screw, best steel centres, hand rest and 2 tees, machine-planed cast-iron bed, 3½ in. face, 3 in. deep, securely bolted to cast-iron standards; wrought-iron crank shaft and treadle, working on steel centres, turned speed fly-wheel, tool board, leather driving cord, driver chuck, drill chuck, &c., complete. WEIGHT, 180 lb.

Price ... £6 10s., or with 3 ft. Bed, £7.

BRITANNIA WORKS, COLCHESTER, ENGLAND.

IMPROVED FOOT LATHE.

No. 4.



THIS illustration represents an excellent Foot Lathe especially suited for Gas Fitters, Jewellers, Dentists, or Amateurs.

It has a machine-planed iron Bed, 3ft. long, on strong iron standards, with 4-speed turned fly-wheel, and an easy, light-running treadle movement.

The single-gear headstock has a steel mandrel, with hard-coned neck running in hard collar.

The back-gear headstock has a steel mandrel, with reverse cones (adjustable to take up wear), and running in gunmetal collars, steel-coned centre, 3-speed turned coned pulley.

The tailstock has cylinder mandrel, with square thread steel traversing screw and steel-coned centre. Each Lathe is accompanied by hand rest, with two tees, two face plates (large and small), two plain centres, spanner, and tool table. The 3ft. Lathe takes 1ft. 6in. between centres.

Slide-rest as per List.

Strength and durability are obtained, in a high degree, without clumsiness.

		£	s.	d.			£	s.	d.
3½in. Centre	..	8	0	0	Back Geared	..	10	0	0
4 " "	..	8	10	0	"	..	10	15	0
4½ " "	..	9	0	0	"	..	11	10	0
5 " "	..	9	10	0	"	..	12	0	0

3ft. 6in. Bed, 10s. extra.

If with Gap Bed and Bridge, £1 extra.

Extra Large Face Plate, to use with Gap Bed, £1.

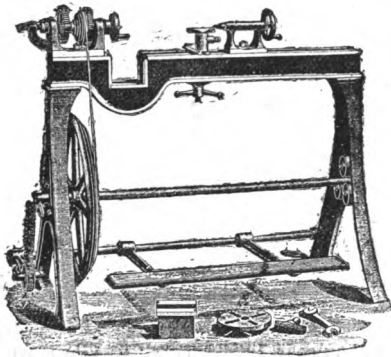
Extra hardened Mandrel and Collars, 30s. extra.

BRITANNIA WORKS, COLCHESTER, ENGLAND.

IMPROVED FOOT LATHE.

—‡‡ No. 5. ‡‡—

THIS is a similar Lathe to the No. 4, but with heavier Bed, Standards, and Fly Wheel—altogether of a stronger and more substantial description. Bed is 4ft. long and 4½in. on face; total weight of Lathe, about 4½ cwt. It has an Improved Treadle



Motion, combining great power with ease of motion; the bright turned shaft on which wheel is keyed runs in Friction Rollers at each end. The Head is fitted with steel mandrel and gunmetal collars. The Crank (as illustration shows) is *outside* the left-hand standard, and is slotted in order that the driving stud may be adjusted to give more or less leverage, to increase or decrease power at will of the operator. The Fly

Wheel is counterbalanced to avoid dead centre.

Each Lathe is accompanied by Hand Rest with two Tees, two Face Plates (large and small), two Plain Centres, and Spanners.

	£	s.		£	s.
4in. Centre ...	11	0	Back Geared ...	13	0
4½ " ...	11	10	" ...	13	15
5 " ...	12	0	" ...	14	10

Gap Bed, £1 extra.

Extra large Face Plate to suit, £1 extra.

A similar Lathe, with 5in. centre, heavier bed, 5½in. on face, 5ft. long, weight about 5½ cwt.—

Single Geared ...	£14	Back Geared ...	£16;
or with 6ft. Bed, 20s. extra.			

Headstocks fitted with extra hard Mandrel and Collars, 30s. extra.

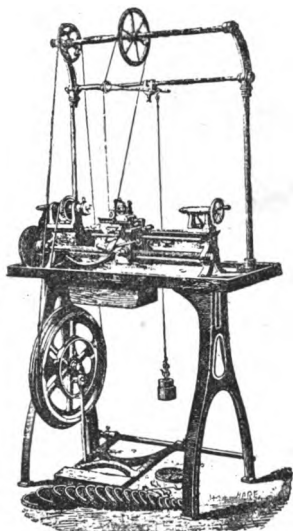
THE ABOVE LATHES CAN BE FITTED WITH HOOKS
AND CRANKS INSTEAD OF CHAINS.

The Lathes with 4ft. Bed will measure 2ft. 4in. between Centres.

BRITANNIA WORKS, COLCHESTER, ENGLAND.

LATHE No. 13.

*Improved Self-acting, Sliding, and Screw-cutting
Gap Bed Lathe, of superior finish, best material
and workmanship.*



SPECIFICATION.—3in. centre, 30in. gap bed; the headstock is back-geared, with cast steel spindle, conical necks, steel lock nuts and back centre, coned pulley, turned 3-speeds for gut band, fitted with reversing motion for cutting right and left-hand screws; compound slide rest on carriage, with long bearings accurately fitted and scraped to bed, and well gibbed. The top slide is made swivel, and is graduated to 50° each side of centre to turn cones to any desired angle; strong tool holder with steel screws; tail stock of good design, cylinder mandrel, square thread traverse screw, bright turned hand wheel. The bed (machine planed) is 3½in. on face, 2½in. deep, with gap 2½in. deep and 2½in. wide. The leading screw is ½in. diameter, ½in. pitch, accurately cut; the gunmetal nut is in halves to detach, and lathe is fitted with rack and pinion for quick return motion. It has a full set of 22 change wheels to cut screws from one to sixty

threads per inch; it is fitted with face plate, catchplate, steel centres, double spanner, and mounted on an iron stand with polished wood top and drawer; fly-wheel 20in. diameter with 4-turned speeds, treadle motion, &c., complete. Measures between centres 19in., swings 10½in. by 2½in. in gap, 6in. over the bed, and 4½in. over the carriage. Total weight about 2½cwt.

Price complete, 15 Guineas.

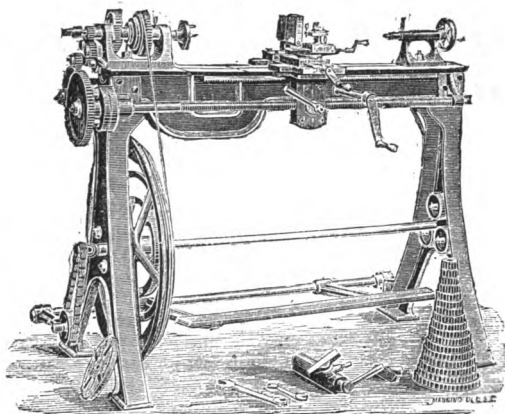
Ditto with 3ft. Gap Bed, 16 Guineas.

Overhead Motion for Ornamental Turning, as Illustration, including Drill Spindle, 5 Guineas extra.

BRITANNIA WORKS, COLCHESTER, ENGLAND.

No. 15 LATHE.

*Overhead Motions similar to
that shown on No. 13 Lathe*



can be fitted to any Lathe.

Self-acting Sliding and Screw-cutting, with 4ft. gap bed, back geared headstock, cast steel mandrel, conical necks running in gunmetal collars, steel lock nuts and back centre, cone pulley, turned 3-speeds for gut band, fitted with reversing motion for cutting right or left-hand screws. Compound slide rest, with long bearings, accurately fitted to bed. The top slide is made to swivel, and is graduated to 50° each side of centre to turn cones to any angle. The tail stock has cylinder mandrel, square thread traverse screw, bright turned hand wheel.

The bed is accurately planed, and is 6½in. wide and 4½in. deep. The gap is 4½in. deep. Steel leading screw, 1½in. diameter and ¼in. pitch; the gunmetal nut for ditto is in halves to detach. The Lathe is fitted with rack and pinion for quick return. It has a full set of 22 change wheels, to cut from 1 to 60 threads per inch, is fitted with steel centres, face plate, catch plate, double spanner. Strong iron stand, with improved treadle motion, with adjustable outside crank and friction rollers, or with ordinary crank and pitman. The 4ft. Lathe measures between centres 2ft. 6in., swings 1ft. 4in. in gap. The fly wheel is counterbalanced, and has 5 speeds. Weight of 4in. Lathe about 5 cwt.

*These Lathes can be fitted with Overheads for Steam
Power at same price as for Foot Power.*

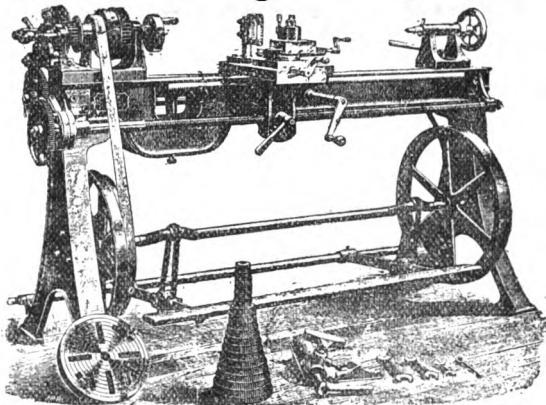
**Price, with 4in. centre, £25 4s.; 4½in., £26 15s. 6d.;
5in., £28 7s.**

*If Self-acting and Surfacing by leading screw, extra, £4. If with Flat
Speed Pulleys, 21/- extra. Set over Poppet, 30/-.*

BRITANNIA WORKS, COLCHESTER, ENGLAND.

No. 18.

Self-Acting, Sliding, and Screw-Cutting Lathe,



With gap bed accurately planed and surfaced, and bridge piece fitted to gap; double geared headstock; steel spindle with conical neck; gunmetal bearings; reversing motion for cutting right and left-hand screws; the loose head has cylinder barrel and left-hand traverse screw, and made to set over for taper turning if required; steel leading screw accurately cut, and extending full length of bed, with double clam gunmetal nut-gripping screw at top and bottom; saddle with long wings, flush top, and grooved for bolting work to, when boring; quick hand traverse by rack and pinion; compound slide rest to swivel to any angle, graduated for turning conical, and steel draw screws; back following stay; catch and face plates; twenty-two change wheels; index plate; treadle motion; screw keys, &c., &c. All materials and workmanship guaranteed. The 5ft. Lathe measures 3ft. 2in. between centres.

SPECIFICATION.

Breadth of Bed	7 inches.	6in. Cone Pulley, 3 speeds	1½in. broad.
Depth of Bed	5½ "	5in. Cone Pulley, four speeds	1½in. broad.
Width of Gap	6½ "	Large Cone	6½in. diameter.
Depth of Gap	5½ "	{ Large Gear	6½in. "
Diameter of Leading Screw .	1½ "	{ 1½in. Broad	¾in. pitch. "
Pitch of " " " " " "	1 " "	Body of Spindle	1in. diameter.
Diameter of Back Shaft . .	1 " "		
Change Wheels, 22	½in. Pitch.		

Approximate Weight with 6ft. Bed, 10½ cwt.

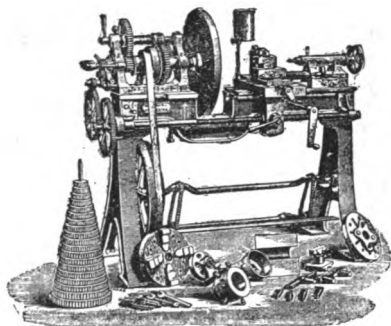
Price, Sliding and Screw Cutting, 5in. Centre, 5ft. Bed	£31 10 0
Do. do. 6in. Centre, 6ft. Bed	35 14 0
Extra Length of Bed, per foot	2 0 0
If made without Treadle, but with Overhead for Steam Power, 5in. Centre, 5ft. Bed	30 0 0
Do. do. 6in. Centre, 6ft. Bed	34 0 0
If Self-acting Sliding, Surfacing, and Screw Cutting (by Back Shaft and Leading Screw), extra	4 4 0
Poppet to set over, extra	1 0 0
If with Cone Speed for Gut Band instead of Flat Belt, deduct	1 1 0

The above is of same quality as supplied to the British Government.

BRITANNIA WORKS, COLCHESTER, ENGLAND.

Treble Geared Lathe.

Designed for, and supplied to, the Royal Navy.



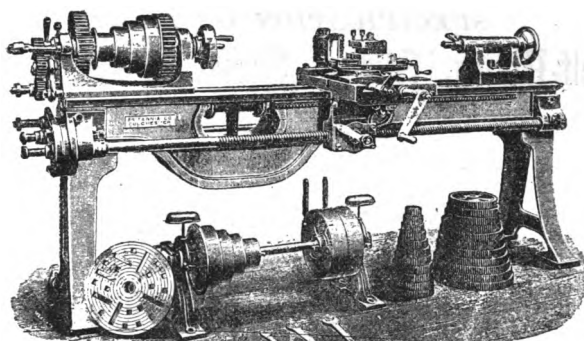
5ft. bed, 5in. centre, £36.

6ft. bed, 6in. centre, £46 10s.

ABOVE Lathes are made for doing extra heavy work by foot power where steam is not available. They are instantly changed from single to double or treble gear.

For Full Particulars, see Catalogue.

BRITANNIA WORKS, COLCHESTER, ENGLAND.



No. 17.—SELF-ACTING SLIDING and SCREW CUTTING LATHE,

6in. CENTRE.

With gap bed accurately planed and surfaced, and bridge piece fitted to gap; double-gearred headstock; steel spindle with conical neck; gunmetal bearings; reversing motion for cutting right and left-hand screws; The loose head has cylinder barrel and left-hand traverse screw, and made to set over for taper turning if required; Steel leading screw accurately cut, and extending full length of bed, with double clam gunmetal nut-gripping screw at top and bottom; saddle with long wings, flush top, and grooved for bolting work to, when boring; quick hand traverse by rack and pinion; compound slide rest to swivel to any angle, graduated for turning conical; and steel draw screws; back following stay; catch and face plates; twenty-two change wheels; index plate; overhead motion; screw keys, &c. &c. All materials and workmanship guaranteed.

SPECIFICATION:—

Breadth of Bed, 8 $\frac{1}{2}$ in.; Depth of Bed, 6in.; Width of Gap, 7 $\frac{1}{2}$ in.; Depth of Gap, 6in.; Diameter of Leading Screw, 1 $\frac{1}{2}$ in.; Pitch of Leading Screw, $\frac{1}{2}$ in.; Diameter of Back Shaft, 1in.; Change Wheels (22), $\frac{5}{16}$ in. Pitch; Cone Pulley, 4 speeds, 2in. Broad; Large Cone, 7 $\frac{1}{2}$ in. Diameter; Large Gear, 8 $\frac{1}{2}$ in. Diameter; 1 $\frac{1}{2}$ in. Broad, $\frac{1}{8}$ in. Pitch; Body of Spindle, 1 $\frac{1}{2}$ in. Diameter. Approximate Weight with 6ft. Bed, 13 $\frac{1}{2}$ cwt. Admits between centres 3ft. 6in.

Price, Sliding and Screw Cutting	£	s.
	37	16
Price for Self-acting Sliding, Surfacing, and Screw Cutting (by Back Shaft)	44	2
Poppet to set over, extra	1	0
Extra Length of Bed, per foot	2	0
If fitted with Crank Shaft and Treadle Motion instead of Overhead Motion, extra	6	0

Many of the above Lathes have been Supplied to the British Government.

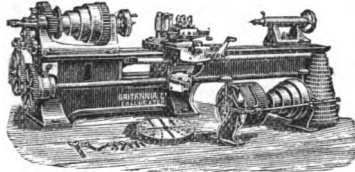
Made also 9in. and 10in. Centres, stronger pattern; 8ft. to 18ft. Beds.

BRITANNIA WORKS, COLCHESTER, ENGLAND.

SPECIFICATION OF No. 22

Self-Acting, Sliding, Surfacing, and Screw-Cutting Lathe,

12in. CENTRE, 12ft. GAP BED.



FITTED with double-gear headstock, steel spindle, conical necks, gun-metal bearings, reversing motion for cutting right and left-hand screws; the loose headstock is fitted with cylinder mandrel, and left-hand square thread traverse screw, bright turned hand wheel, and can be made to set over by transverse slide motion for taper turning, if desired. The saddle has a flush top and T grooves for bolting work for boring purposes, compound slide rest, made to swivel to any angle for surfacing, and graduated for turning conical. The bed is accurately planed and surfaced, and provided with movable bridge piece for gap, box end at left hand, and firmly bolted to strong standard with planed faces at right-hand end. The metal is carefully distributed, so that the Lathe is quite rigid under the heaviest cutting strain; the leading screw is of steel, accurately cut, and extends full length of bed. It has a double clam gunmetal nut, actuated by eccentric movement to engage and release the saddle, the latter having also a quick hand traverse by rack, pinion, and double-purchase gearing.

The Lathe is fitted complete with back traversing stay, 22 change wheels, index plate, 24in. face plate, catchplate, and top driving apparatus complete, screws, keys, &c.

DIMENSIONS.

Bed, 19in. wide by 13in. deep; Gap, 19 $\frac{1}{2}$ in. wide by 11 $\frac{1}{2}$ in. deep, swinging 47in. diameter; Leading Screw, 2 $\frac{1}{2}$ in. diameter, $\frac{1}{2}$ in. pitch; Back Surfacing Shaft, 1 $\frac{1}{2}$ in. diameter; Extreme Length between Centres, 6ft. 8in.; Cone Pulley, four Speeds, 3 $\frac{1}{2}$ in. wide—largest speed, 16in., and smallest, 6 $\frac{1}{2}$ in. diameter; Gearing, 3 $\frac{1}{2}$ in. wide by 1 $\frac{1}{2}$ in. pitch—largest, 17 $\frac{1}{2}$ in.; Pinion, 6in. diameter; Steel Spindle, 2 $\frac{1}{2}$ in. body, 2 $\frac{1}{2}$ in. nose; Change Wheels (22), $\frac{1}{2}$ in. pitch. Approximate weight—4 tons.

£ s. d.

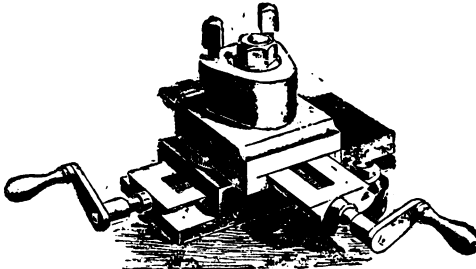
Price, Sliding and Screw Cutting	..	..	..
" Sliding, Surfacing, and Screw Cutting	..	..	..
Poppet to Set over for Taper Turning, extra	..	..	..
Extra Length of Bed, per foot	..	..	..

We make a Lathe of similar design to the above, but of 14in. Centres, and with Beds to any length.

These Lathes are fitted for hard and accurate work, and are similar to those supplied to the British Government.

BRITANNIA WORKS, COLCHESTER, ENGLAND.

BRITANNIA CO.'S Improved Compound Slide Rest.



To suit 2½ in. centre Lathe ..	£2 0 0	To suit 5 in. centre Lathe ..	£5 0 0
„ 3 in. „ ..	2 10 0	„ 6 in. „ ..	6 0 0
„ 3½ in. „ ..	3 0 0	„ 7 in. „ ..	7 0 0
„ 4 in. „ ..	3 10 0	„ 8 in. „ ..	8 0 0
„ 4½ in. „ ..	4 0 0		

These are made so that the Bottom Slide always remains at a right angle with the Lathe Bed, the Rest having a swivel arrangement, accurately graduated, for turning taper or conical work to any desired angle.

The bottom cover, extending full length, excludes turnings and dirt from the screw and slide.

The materials are of the best. Screws are cast steel, gunmetal nuts, horn handles, improved tool box, with hardened steel screws.

The workmanship is excellent. The slides, &c., are surfaced up, and the parts, being machine made and uniform, are interchangeable.

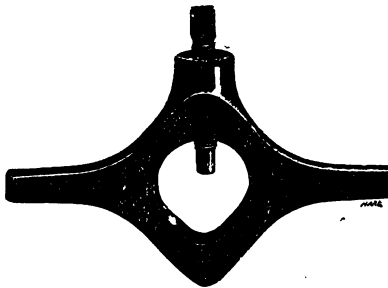
Patent Double Driving Carriers.

Prices:

1 in. to 1½ in., 3/6

1½ in. to 2 in., 4/6

2½ in. to 2½ in., 5/6



Prices:

2½ in. to 3 in., 7/6

3½ in. to 3½ in., 9/6

3½ in. to 4 in., 11/6

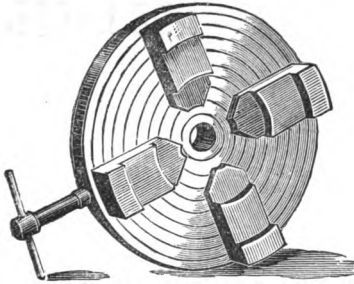
Equalise the strain, and are generally more useful than ordinary carriers.

“ONCE TRIED ALWAYS USED.”

When the Lathe has not a Clement's driver, a stud in the face plate is required.

BRITANNIA WORKS, COLCHESTER, ENGLAND.

INDEPENDENT 4-JAW CHUCKS.



6 inch	...	...	...	60s.
8 "	...	...	...	80s.
9 "	...	...	...	90s.
10 "	...	...	...	100s.
12 "	...	...	...	120s.

Larger sizes, up to 20 inches diameter, per inch, 10s.

Above are extra strong, with wrought Jaws, and more durable than those generally sold.

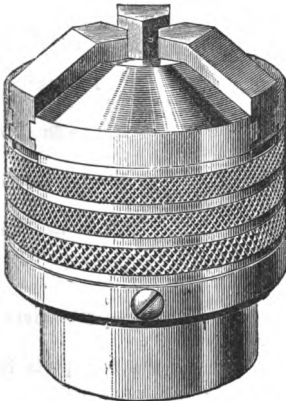
THE JEWELLER'S CHUCK



Is a valuable appliance to the mechanic or amateur. It carries drills, circular saws, and polishing brushes and polishing bobs.

Price 7s. 6d.; Saws to suit, 2s. 6d.; Polishing Brushes, 1s. 6d.; Emery Wheels, 2s. each.

WHITON'S "1883" DRILL CHUCK.



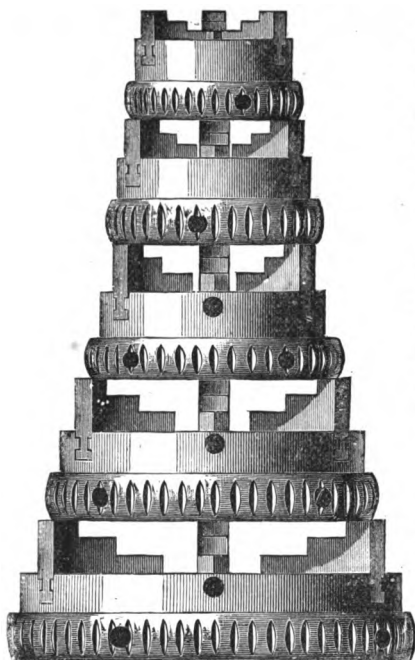
These Chucks are easily attached to any Lathe or Drill by a taper plug. All the parts are of steel, and thoroughly made.

No. 1, 2in. diameter, holds Drills from 0in. to $\frac{9}{16}$ in., 17s.

No. 2, 2½in. diameter, holds Drills from $\frac{1}{4}$ in. to $\frac{3}{4}$ in., 21s.

BRITANNIA WORKS, COLCHESTER, ENGLAND.

WHITON'S IMPROVED AMATEUR CHUCKS



Are very neat in design, and are intended for amateurs' use on foot and light power lathes, and for all classes of light work.

Although very light, they are strong and durable, the shell being made of malleable iron, and the scroll and jaws of steel.

They are intended for attachment by means of a face plate.

They operate by hand or lever.

Diameter.	Weight about.	With Lathe Jaws (as shown in sketch).	With Lathe and Drill Jaws.
2 inches.	$\frac{3}{4}$ pounds.	19s.	24s.
2½ "	1½ "	21s.	26s.
3 "	1¾ "	23s.	28s.
4 "	3½ "	27s.	34s.
5 "	5 "	32s.	38s.

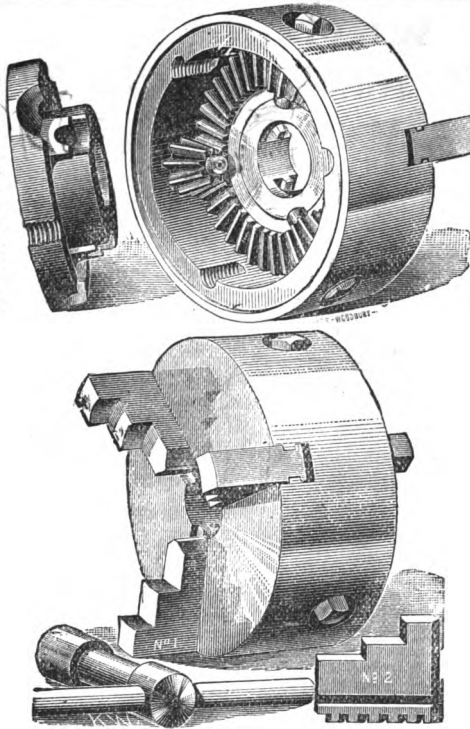
Above Prices include Levers and Face Plate Screws.

When ordering chucks, it is necessary to send a chuck which exactly fits your mandrel. When chucks require fitting, an extra charge is made, usually about 10s. for face plate, &c.

Other American Scroll Chucks to order at usual lists.

BRITANNIA WORKS, COLCHESTER, ENGLAND.

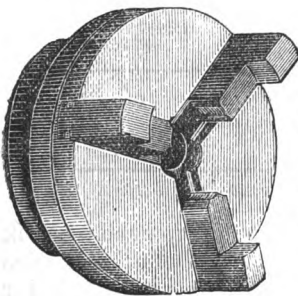
WHITON'S PATENT GEARED SCROLL CHUCK.



DIAMETER.	WEIGHT ABOUT.	PRICE.	DIAMETER.	WEIGHT ABOUT.	PRICE.
2 1/2 inches.	2 pounds.	30s.	6 inches.	12 1/2 pounds.	71s.
3 1/4 "	3 "	42s.	7 1/2 "	20 "	80s.
4 1/8 "	6 "	50s.	9 "	35 "	92s.
5 "	8 1/4 "	59s.	12 "	60 "	125s.

The outer shells of all chucks up to and including 5in. are of malleable iron, and the jaws, scrolls, pinions, &c., of all sizes are of steel. The workmanship is first-class throughout. Price List includes keys and bolts. Unless otherwise ordered, these chucks are always supplied with lathe jaws. Add 10 per cent. for chucks having four jaws. Add 20 per cent. for chucks having two sets of jaws (lathe and drill).

WHITON'S IMPROVED LEVER CHUCKS.



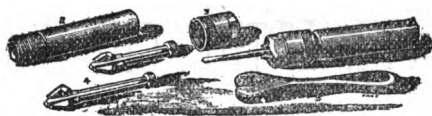
A heavy band of wrought iron is shrunk firmly around the front plates of the larger sizes, which are thus greatly strengthened. The holes in the scroll for receiving the lever are drilled into bosses cast for the purpose, while the outer rim of the scroll between these bosses is much lighter than formerly; thus the parts of this chuck receiving the heaviest strains are made stronger than in other chucks of this class, without making them inconvenient from over weight.

The front plates of the 3in., 4in. and 6in. sizes are of malleable iron, and the scrolls and jaws of steel.

DIAMETER.	PRICE.	DIAMETER.	PRICE.
3 inches.	34s.	15 inches.	134s.
4 "	42s.	18 "	159s.
6 "	67s.	21 "	200s.
9 "	88s.	24 "	250s.
12 "	109s.		

Unless otherwise ordered, these chucks are always supplied with lathe jaws. Add 10 per cent. to above list for chucks with four jaws. Add 20 per cent. to above list for chucks with two sets of jaws (lathe and drill).

BRITANNIA WORKS, COLCHESTER, ENGLAND.

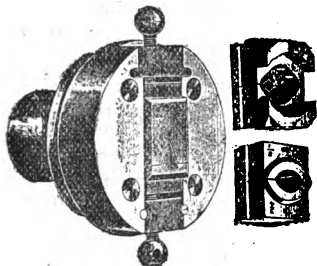


THE ESSEX CHUCK.

To take up to $\frac{1}{4}$ in. Drills	...	...	...	...	10s.
Size larger, to take $\frac{1}{2}$ in. Drills	...	...	...	...	25s.

Made of Steel throughout.

A CHEAP AND DURABLE CHUCK.



J. K. P. CHUCK.

50s.

Extra jaws, 10s.

Holds Tighter.

Wears Longer.

**Holds Irregular Forms
as well as Regular.**

Can be set Eccentric.

With the Jaws as Fixed it Holds Drills $\frac{5}{16}$ to $\frac{3}{4}$.

Holds Articles $\frac{1}{16}$ to $1\frac{1}{16}$ with No. 1B Die.

Die 1A is made to hold to $\frac{1}{2}$, $\frac{1}{4}$ to $\frac{3}{4}$, $\frac{3}{8}$ to 1-inch.

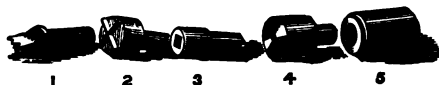
Special Jaws made to Suit Special Jobs.

BRITANNIA Co. have much pleasure in recommending the above Chuck. It offers many advantages which will be obvious to experienced Mechanics.

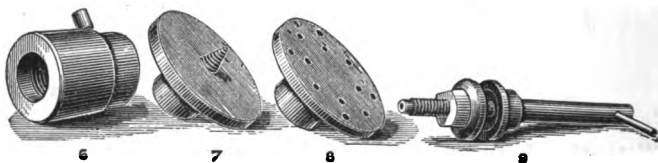
PRICE £2 10s. with one set of Jaws; 10s. per pair for extra Jaws of either pattern.

BRITANNIA WORKS, COLCHESTER, ENGLAND.

USEFUL LATHE CHUCKS, &c.



No.		£	s.	d.
1	Pronged Chuck, for wood, $\frac{3}{8}$ in. shank	0	2	6
2	Cross or Four-blade Chuck, for hard wood, $\frac{3}{8}$ in. shank ...	0	3	0
3	Square Tapered-hole Chuck, to suit ordinary brace bits, $\frac{3}{8}$ in. shank	0	3	0
4	Solid Gunmetal Chuck, $\frac{3}{8}$ in. shank, face left solid and plain to turn to requirements	0	1	6
5 & 6	Main Chuck, turned and tapped to fit nose of mandrel, and with $\frac{3}{8}$ in. hole at other end to receive the "Essex" or other small chucks	0	7	6
7	Flange Chuck, 2 in. diameter, with taper screw for wood	0	6	0
	Ditto, 4 in. diameter	0	7	6

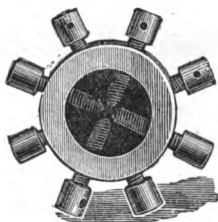


8	Flange Chuck for attaching flat wood to, bored and tapped to fit mandrel nose, and drilled, countersunk at back, 3 in. diameter	0	5	0
	Ditto, ditto, 6 in. diameter	0	7	6
	Gunmetal Cup Chucks, of various diameters $\frac{3}{8}$ in., 2/6; 1 in. 3/-; 1 $\frac{1}{2}$ in., 4/-; 1 $\frac{3}{4}$ in., 5/-; 2 in., 6/6; 2 $\frac{1}{2}$ in., 8/-; and 3 in., 10/- each The set	1	19	0
	Drill Chuck, $\frac{3}{8}$ in. hole, with set screw and extra plug for small drills, $\frac{3}{8}$ in. shank	0	4	6
	Self-centring Chuck for wood, with conical hole, ribbed longitudinally	0	7	6

BRITANNIA WORKS, COLCHESTER, ENGLAND.

USEFUL LATHE APPLIANCES.

BELL CHUCKS.



Outside diameter.	Inches—	2	3	4	5	6	7	7½	10
Four Screws	14/-	15/-	17/6	22/6	25/-	32/6	38/-	50/-
Eight Screws	14/-	18/-	22/-	25/-	30/-	38/-	45/-	60/-

Oval, Eccentric, and Ornamental Chucks made to order.
Ornamental Rests, Drill Spindles, Cutters, &c.

Lathe Carriers, Steel Screws, turned shanks, ½in. 1/4; ½in. 1/8; ½in. 2/-; 1in. 2/6;
1½in. 3/-; 1½in. 3/6; 1½in. 4/6; 2in. 5/-

Turning Tools for Wood or Metal, for Hand, 1/-, 1/6, and 2/- each. Ditto for Slide
Rests, ½in. 1/-; ½in. 1/3; ½in. 1/6; ½in. 1/9.

Screw Chasing Tools, internal and external, price per pair, Handled, from 40 to 12
threads per inch, 3/-; from 11 to 6 threads per inch, 4/-

Taps, Taper or Plug,

Size	½	⅝	¾	⅞	1	1¼	1½	1¾	2	2½	3	inch.
Price	2/-	2/-	2/-	2/6	2/6	3/-	4/-	5/-	7/-	8/-	9/-	each.
Boring Bars			2/6	3/-	3/-	4/-	5/-	each.				Cutters, 6d. each.
Swivel Cutter Bars	7/6	8/6	8/6	9/6	11/-	„	„	„	„	„	„	„

Plain Drills, 2d., 3d., 4d., and 6d. each. Milling Wheels, with Handles, 2/- each.

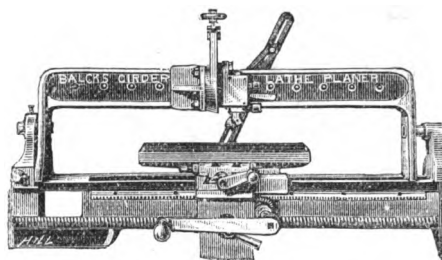
Circular Saws, 4in. 4/-; 5in. 5/6; 6in. 7/-; 7in. 8/-; 8in. 9/6 each.
Platforms for ditto, 6 by 8, 12/6; 8 by 12, 15/-

Mandrel with Screw Collars for Holding Saws or Emery Wheels, 6/- and 8/- each.

Grindstones, with Troughs, for fixing on above Mandrels,
4in. 3/6; 5in. 4/-; 6in. 5/-

BRITANNIA WORKS, COLCHESTER, ENGLAND.

BALCK'S PATENT GIRDER * LATHE * PLANER.



The above Engraving illustrates a very handy Planer.

IT is made to work upon the bed of a Lathe, and it is secured in its place between the centres. A rack and pinion screwed under the top of lathe bed, and a crank handle, gives the movement backward and forward. The saddle of a screw-cutting Lathe may in some cases be utilised.

It has a self-acting feed motion, and some are fitted with two tool boxes, so as to cut each way. Britannia Company fit Lathes to suit this Planer without extra cost, but ordinary Lathes require stronger racks, and extra is charged for fitting.

This tool had a very favourable notice in the *English Mechanic*, May 7th, 1886.

PRICE FROM £9.

~~~~~  
**A similar Planer, but fitted with an independent bed, which can be worked on any Bench or Table, price £10, is a most valuable addition to the workshop of the Mechanic.**  
~~~~~

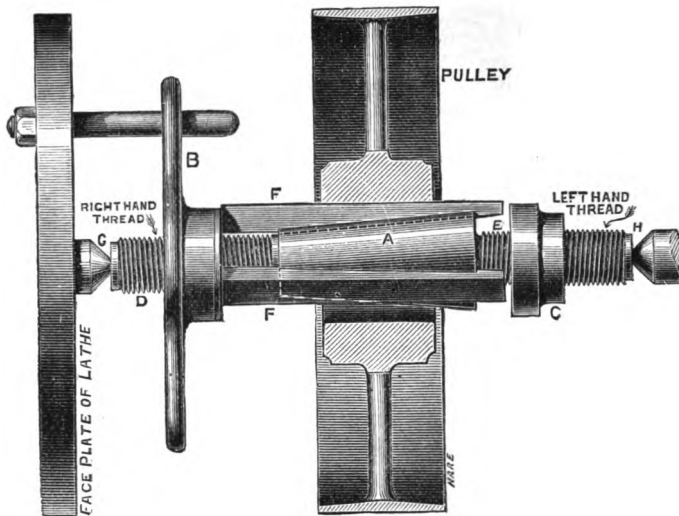
SOLE MAKERS:—

Britannia Company, Colchester.

ON VIEW AT THEIR SHOW-ROOMS,

100, * HOUNDSDITCH, * LONDON.

BRITANNIA WORKS, COLCHESTER, ENGLAND.



PATENT

Expanding Lathe Mandrel.

Made in various Sizes, from $1\frac{1}{4}$ in. to $2\frac{3}{8}$ in.

**Supplied to the Royal Arsenal and all
the principal Railway Works, &c.**

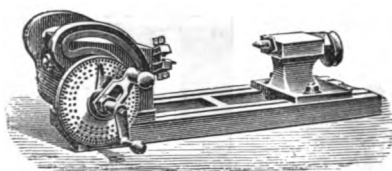
Sole Makers—Britannia Co., Colchester.

.....
GEAR CUTTERS, STOCKS AND DIES, TWIST DRILLS,
PORTABLE FORGES, ANVILS, VICES (FOR IRON
OR WOOD), MORTICING MACHINES, BAND SAWS.

~~~~~  
*Above are supplied, of reliable quality, at Moderate Prices.*

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**BRITANNIA WORKS, COLCHESTER, ENGLAND.**

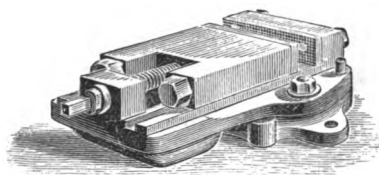


## ✧ DIVIDING APPLIANCE, ✧

*FOR MILLING AND SHAPING,*

✦ AS SUPPLIED TO THE ROYAL ARSENAL. ✦

---



## ENGINEER'S VICE

(STRONG PATTERN, WITH SWIVEL BOTTOM),

*FOR MILLING AND PLANING.*

**Price £5 10s.**

---

**DRILLING MACHINES IN GREAT VARIETY,**


*From 50s. upwards.*

**PLANING MACHINES, SHAPING MACHINES, SLOTTING MACHINES.**

**MILLING MACHINES (3 Patterns):**

Our largest will mill six surfaces 4ft. at one operation.

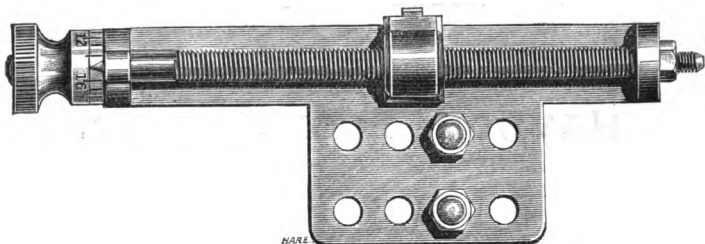
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 **TOOLS DESIGNED, OR MADE TO DRAWING,**

**For Special Work.**

**Apply at BRITANNIA TOOL FACTORY, COLCHESTER.**

# BRITANNIA COMPANY'S Registered Screw-Cutting Guide.



**T**HE above appliance can be used on any Lathe. By its use the workman can regulate the depth of cut to the greatest nicety, and the use of the chalk mark, or any such expedient, is unnecessary.

It can be used for inside or outside screw cutting, or other work requiring uniformity. It saves time from insufficiency of cut. It prevents the breaking of tools, or the work being torn out from the centres. It is a reliable stop for ornamental drilling and fluting.

While the Lathe is cutting this can be adjusted for the following cut. It only requires to be bolted upon the saddle of a Screw-cutting Lathe, and a projecting stud or screw fixed in the middle slide engages the stop.

It can also be used on ordinary Lathes with slide rest—in this case it must be fixed to the bed.

This is a tool which has long been wanted by engineers, and will also be appreciated by amateurs.

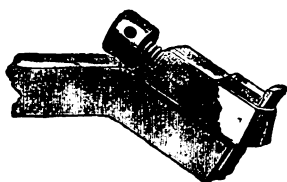
## PRICES.

|                                |     |     |      |
|--------------------------------|-----|-----|------|
| For 3in. to 4in. Centre Lathes | ... | ... | 25s. |
| 5in. and 6in.                  | „   | ... | 30s. |
| 8in. to 10in.                  | „   | ... | 35s. |

**Sole Makers :—BRITANNIA COMPANY,  
100, HOUNDSDITCH, LONDON.**

All Letters to Britannia Works, Colchester.

BRITANNIA WORKS, COLCHESTER, ENGLAND.



## HAYDON TOOL-HOLDER.

### ADVANTAGES :

Users of these Holders save the cost and inconvenience of forging their tools.

The Cutters are easily sharpened to the correct angle.

By due attention to the instructions superior finish can be given to the work.

A stock of the small Cutters can be always kept sharpened, as they cost but little, and occupy a small space.

The steel of which the Cutters are made can be bought in 12in. or 14in. lengths, and cut off as required, or Cutters can be purchased at 6d. each.

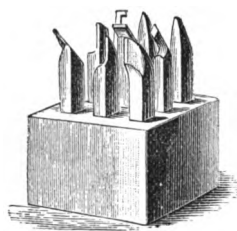
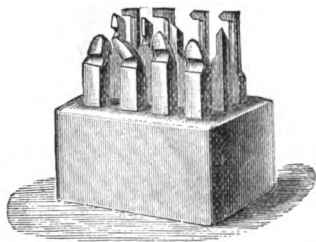
Plain directions for sharpening Cutters to the **exact angle** required for various metals, and how to use the tools to best advantage, will be sent with each Bar. A diagram showing the various angles will prevent the possibility of errors in judgment.

|                                                                                  |       |      | s. d. |
|----------------------------------------------------------------------------------|-------|------|-------|
| $\frac{3}{4}$ in. Bars, will suit Lathes 3in. and 3 $\frac{1}{2}$ in. centre ... | Price | 9 6  |       |
| $\frac{1}{2}$ in.       "       "       4in., 4 $\frac{1}{2}$ in., and 5in. ...  | "     | 10 0 |       |
| $\frac{5}{16}$ in.       "       "       5in. or 6in. ... ..                     | "     | 10 0 |       |
| $\frac{3}{8}$ in.       "       "       6in. and 7in. Lathes ...                 | "     | 12 6 |       |
| $\frac{7}{16}$ in.       "       "       7in. to 9in. ... ..                     | "     | 15 0 |       |
| lin., for larger sizes       ... ..                                              | "     | 17 6 |       |

BRITANNIA WORKS, COLCHESTER, ENGLAND.



# ADVERTISEMENTS.



## SLIDE REST TOOLS

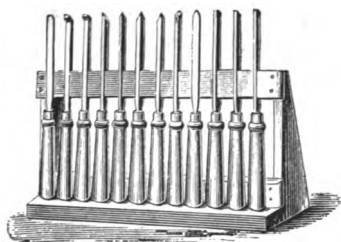
In great variety, made of the very best steel.

The Patterns most generally used are: No. 1; No. 19.  
Sold Singly, or in Sets.

|           |               |                |               |               |          |
|-----------|---------------|----------------|---------------|---------------|----------|
|           | $\frac{3}{8}$ | $\frac{1}{2}$  | $\frac{5}{8}$ | $\frac{3}{4}$ | inch.    |
|           | 1/-           | 1/3            | 1/6           | 1/9           | each.    |
| No. 20. { | $\frac{3}{8}$ | $\frac{1}{2}$  | $\frac{5}{8}$ | $\frac{3}{4}$ | inch.    |
|           | 7/6           | 8/6            | 9/6           | 10/6          | each.    |
| No. 21. { | $\frac{3}{8}$ | $\frac{7}{16}$ | $\frac{1}{2}$ | $\frac{5}{8}$ | inch     |
| No. 22. { | 2/6           | 3/-            | 3/-           | 4/-           | 5/- each |

BRITANNIA WORKS, COLCHESTER, ENGLAND.

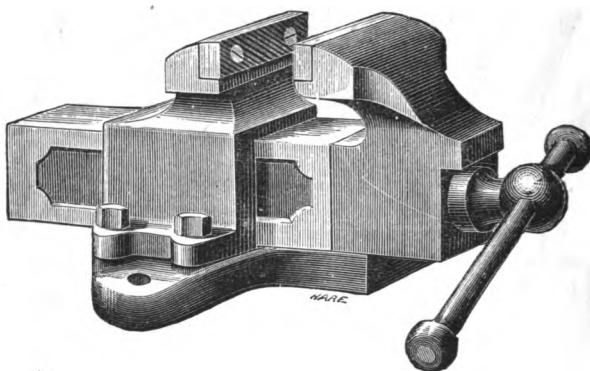
## LATHE TOOLS.



Hand Turning Tools in great variety, 1s. each, 10s. per doz.

Larger sizes, 1s. 3d., 1s. 6d., and 2s. each.

Long Handles if specially ordered.



## PARALLEL BENCH VICES,

*WITH STEEL JAWS.*

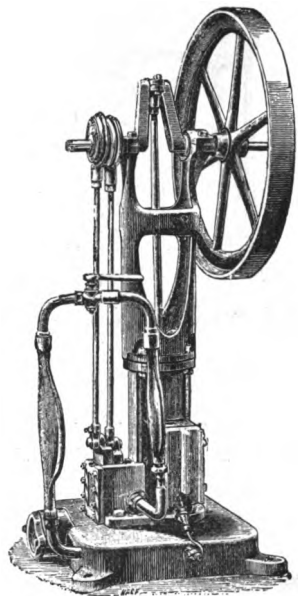
**MADE IN THREE SIZES.**

|                    |        | No. 1.      |     | No. 2.      |     | No. 3.      |
|--------------------|--------|-------------|-----|-------------|-----|-------------|
| Measure across jaw | ...    | 2½in.       | ... | 3½in.       | ... | 3½in.       |
| Will open          | ... .. | 3½in.       | ... | 4in.        | ... | 5in.        |
| Weight             | ... .. | 11lb.       | ... | 18lb.       | ... | 29lb.       |
| <b>Price</b>       | ... .. | <b>10/6</b> | ... | <b>17/6</b> | ... | <b>25/-</b> |

BRITANNIA WORKS, COLCHESTER, ENGLAND.

## **BRITANNIA COMPANY'S CHEAP GAS ENGINE.**

Simple !  
Efficient !  
Making Little  
Noise !  
Economical !  
About 3d. per day  
for Gas !



ONE MAN  
POWER,  
Suitable for  
Lathes,  
Printing Machines,  
Sausage Machines,  
and all  
Light Machinery.

❖ **Price, as shown, £18.** ❖

*The above Engine has been constructed to meet the demand for a really reliable, simple, durable Gas Engine, at a price which would bring it within the reach of all.*

*It is recommended with confidence.*

ONE MAY BE SEEN AT THE

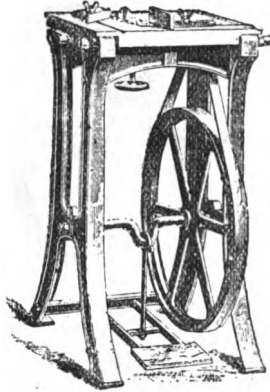
❖ **Britannia Co.'s Show Rooms,** ❖  
**100, HOUNDSDITCH, LONDON.**

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BRITANNIA WORKS, COLCHESTER, ENGLAND.

# USEFUL SAW

FOR LIGHT WOOD OR METAL WORK.

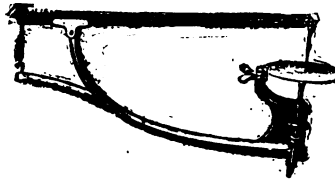


**PRICE £8.**

**CHEAPER PATTERN, £6 10s.**

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## FRET SAW. No. 3.



**PRICE 30s.**

Can be made for any Lathe. It is secured by a bolt and nut under the Lathe bed. Fixed in one minute.

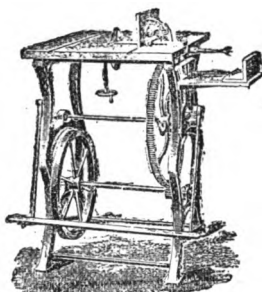
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NOTE.—In ordering, it is necessary to give the exact height from bed to centre, an accurate sketch or zinc template of size and form of Lathe bed, and to send the Lathe mandrel to fit the catchplate to nose-screw; or if a correctly-fitting chuck is sent, it will answer the latter purpose as well.

---

**BRITANNIA WORKS, COLCHESTER, ENGLAND.**

# THE NEW PATENT SAW.



Including one each 8in. Rip and Cross-Cut Saws, and one 6in. Saw, with one pair of Bevel Washers for Grooving, £15.

Fret Arm to suspend from ceiling, for Fret Cutting, £2 10s.

Two Mitre and Cross-Cut Gauges, 17/6.

If 12in. Cross-Cut Saw instead of 8in., 5/- extra.

Adjustable Table at side, including Chuck for holding Bits of various sizes, 22/6.

Centre-Bits fitted:  $\frac{1}{4}$ , 8d.;  $\frac{3}{8}$ , 8d.;  $\frac{1}{2}$ , 8d.;  $\frac{3}{4}$ , 8d.; 1, 10d.;  
 $1\frac{1}{4}$ , 1/-;  $1\frac{1}{2}$ , 1/-;  $1\frac{3}{4}$ , 1/3.

**The Saw can be worked at 1500 Revolutions per Minute.**

A Handle at left—can be used as auxiliary to, or in lieu of, Treadle—price 7/6.

This Saw will cut 10ft. of inch wood in a minute.

-----  
**Especially adapted for Pattern Makers, Cabinet Makers, Joiners, Picture Frame Makers; for Circular Groove Cutting, Dowelling, and Drilling.**

---

**BRITANNIA WORKS, COLCHESTER, ENGLAND.**



FRET SAW, No. 4. 17s. 6d.

## NOTE.

*The Britannia Company  
make several patterns of Fret  
Saws, as per their Fret Saw  
List.*

### THE BRITANNIA COMPANY'S

## "Windsor" Fret Saw, No. 4,

**I**S constructed entirely of iron and steel, except the arms, which are of tough wood for quietness and lightness. The work table is 32in. from the floor, and is made to tilt for inlaying. The upper arm throws back to enable the end of the saw to be inserted for internal work.

The stand is nicely japanned. The driving wheel is 12in. in diameter, with a 5in. balance wheel. It will admit 18in. under the arm. The saw clamps are hung on pivots, and will hold firmly the finest or coarsest saw. It is fitted with an automatic blower and a drill shaft. A drill, wrench, and six saws accompany each machine.

The most surprising thing of all, however, is its cheapness, for the

**PRICE IS ONLY 17s. 6d.**

*If required to be sent by rail—Box to pack, 2s.*

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### Testimonials.

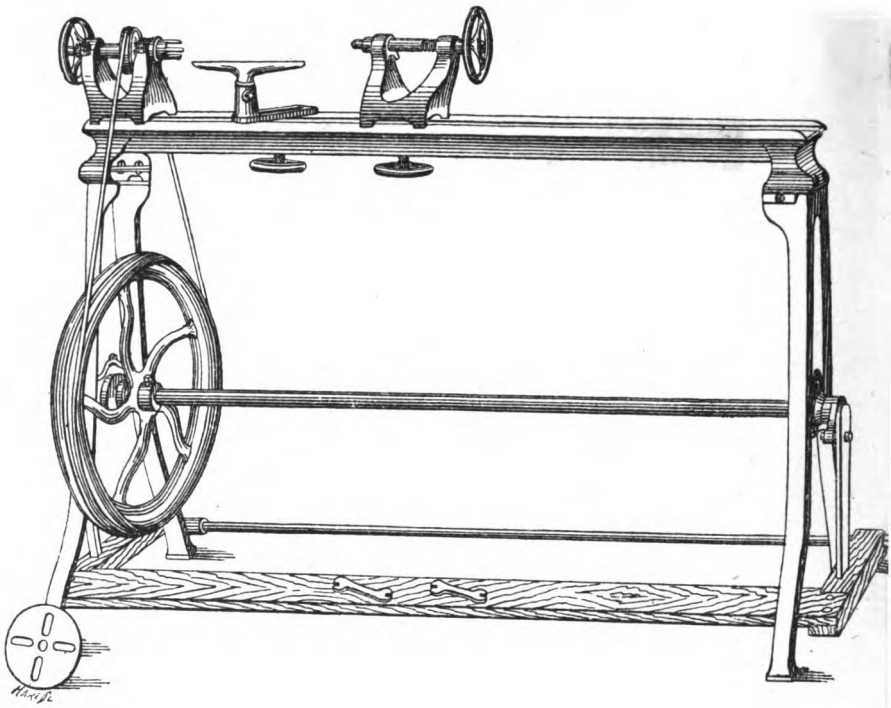
"I received the WINDSOR quite safely a few days ago. I put it together the same night, and find that it *works very well indeed*, and shall recommend it to my friends."

"I have to-day returned the case the WINDSOR came in. I have tried the Machine, and like it *very much*."

"I received the Machine yesterday, in proper order, and find that it works in a *very satisfactory manner*."

---

**BRITANNIA WORKS, COLCHESTER, ENGLAND.**



# THE MULTUM IN PARVO LATHE

NO. 10.

Price £4 10s. 4ft. Bed, 5in. Centres.

A Light Lathe for Wood-Turning. Suited for Pattern Makers  
and Amateurs who will not pay a higher price.

MAKERS—

**BRITANNIA CO., COLCHESTER.**

BRITANNIA WORKS, COLCHESTER, ENGLAND.

